

- (7) **PVC Coated Baskets.** Do not install PVC coated materials until the ambient air temperature and the temperature of the PVC materials are at least 15°F (8°C) above the brittleness temperature of the PVC materials.
- (g) **Backfilling.** Backfill behind gabions according to Subsection 202.02(b) of the Specifications.
- (h) **Retaining Walls.** Construct retaining walls on a 6 to 10% batter (when indicated on the plans). Offset vertical joints in a layer from the previous layer.

602.05. METHOD OF MEASUREMENT.

Measure acceptable *gabions and revetment mattresses*, complete in place, by the cubic yard (cubic meter) as constructed to the dimensions shown on the plans or approved by the Engineer. Measure acceptable *filter fabric*, complete in place, by the square yard (square meter) as constructed to the dimensions shown on plans or approved by the Engineer.

Include stone fill and filter sand for gabions and revetment mattresses in the price bid for the respective bid item. Unless otherwise shown on the Plans, include backfill for gabions in the price bid for gabions.

602.06. BASIS OF PAYMENT.

Accepted quantities of gabions, revetment mattresses, filter fabric measured as provided above, will be paid for at the contract unit price as follows:

- | | | |
|-----|---------------------------|----------------------------|
| (A) | GABIONS | CUBIC YARD (CUBIC METER) |
| (B) | REVTMENT MATTRESSES | SQUARE YARD (SQUARE METER) |
| (C) | FILTER FABRIC | SQUARE YARD (SQUARE METER) |

Such payment shall be full compensation for furnishing all materials, equipment, labor, tools, and incidentals to complete the work as specified

SECTION 603 STEEL JETTY BANK PROTECTION

603.01. DESCRIPTION.

This work shall consist of furnishing materials and placing steel jetty bank protection; this consists of a main line jetty with or without back up jetties as shown on the Plans. The jetties shall consist of steel jacks connected by steel cable or reinforcing bars to a deadman at the anchoring end.

The length of main line and back up jetties and the distance between lines of jetties shall be substantially as shown on the Plans; however, if erosive conditions develop after preparation and approval of Plans, it may be desirable to increase or decrease the length or alter the position of the jetties.

603.02. MATERIALS.

- (a) **Steel Jack.** Each jack shall consist of the following:
- Three new structural steel angles size 4x4 inch x 1/4 inch x 16 feet (100x100mm x 6mm x 4.8m)
 - Six 1/2 inch (13mm) x 1 1/2 inch (38 mm) high strength bolts with hexagon heads and nuts

- No. 6 double annealed smooth wire lacing
- (b) **Steel Cable.** The steel cable shall consist of good, used oil field cable—inspected, respooled, and oil treated—having a diameter of not less than 7/8 inch (22.2 mm) or reinforcing steel bars having a diameter of not less than 3/4 inch (19 mm) and cable clamps of the proper size for fastening.
- (c) **Deadman.** The deadman shall be either concrete or timber. The concrete deadman shall be made from Class A Concrete and shall have minimum dimensions of 3 feet x 2 feet x 1 1/2 feet (1 meter x 0.60 meter x 0.5 meter). The timber deadman shall be either new creosoted railroad ties 6 inch x 8 inch x 8 feet (152 mm x 203 mm x 2.40 meters) minimum or approved creosoted pile cutoffs minimum 7 inch (178 mm) diameter at the smallest end by 8 feet (2.40 meters) in length.

603.04. CONSTRUCTION METHODS.

- (a) **Constructing Jacks.** For each jack, use three steel angles bolted securely together so that each angle is perpendicular to the other two angles. Each jack shall have a minimum height of 9 feet (2.80 meters) and be laced with a minimum of four lines of wire:
 - The **outside line** of lacing shall be tied at each angle.
 - The **second line** of lacing shall pass through each angle approximately 2 feet (0.60 meters) from each end.
 - The **third line** of lacing shall pass through each angle approximately 4 feet (1.2 meters) from each end.
 - The **inside line** of lacing shall pass through each angle approximately 6 feet (1.8 meters) from each end.
- (b) **Anchoring Jacks.** Use double runs of steel cable or reinforcing bars for anchoring the jacks. Pass one cable or bar on each side of the jack, and apply a cable clamp on each side of the jack to hold the cables together and the jack in its original position. Anchor the cables or bars for main line jetty at each end by a deadman. Fasten the cables or bars for backup jetties to the main line at a steel jack and anchor them to a deadman at the opposite end.

Avoid splices as much as possible; where necessary, place them at a jack. To make (1) splices, (2) end connections to timber deadmen, and (3) connection of backup jetties to mainline, wrap each line around the jack or deadman a minimum of 2 times and fasten it with double cable clamps. Connection to concrete deadmen shall be as shown on the Plans. Splice reinforcing bars with a double-flare-v groove weld, minimum, 3 inch (75 mm) length of weld. For details, refer to the current edition of the AWS “Reinforcing Steel Welding Code.”

- (c) **Placing the Deadman.** Place each deadman in a trench so that the pull will be at right angles to the deadman, which shall bear on undisturbed earth. Bury each deadman a minimum of 6 feet (1.8 meters) to the bottom of the deadman. Backfill the trenches with soil compacted to the density of the adjacent undisturbed material.

603.05. METHOD OF MEASUREMENT.

Measure the *steel jacks* by the number of jacks constructed, placed, and anchored as specified. Measure the *steel cable* by the linear foot (meter) of cable as specified. Measure cable length from center to center of deadman for mainline jetty and from its tie to the main line jetty to center of deadman

for backup jetties. Excavation and backfill necessary to place deadmen shall be included in the unit price bid for each *deadman*.

Unless otherwise shown on the plans, excavation necessary to place steel jacks on the slopes shown on the plans shall be included in the unit price bid for each steel jack and meter of steel cable.

603.06. BASIS OF PAYMENT.

The accepted quantities of steel jetty bank protection, measured as provided above, will be paid for at the contract unit price as follows:

(A) STEEL JACK	EACH
(B) STEEL CABLE	LINEAR FOOT (METER)
(C) DEADMAN	EACH

Such price shall include all cost of materials, labor and equipment necessary for installation of the steel jetty bank protection in place.

SECTION 605 DAMPPROOFING

605.01. DESCRIPTION.

Dampproofing shall consist of furnishing materials and placing a prime coat of asphalt and two coats of hot asphalt as shown on the Plans or established by the Engineer.

605.02. MATERIALS.

Materials shall meet the requirements specified in the following Subsections of Section 700 - Materials:

Priming Coat	716.01
Asphalt Coats	716.03

605.04. CONSTRUCTION METHODS.

- (a) **Preparation of Surface.** On surfaces to be dampproofed, dress off all projections and point up all holes with mortar. Remove the outside film of cement by brushing with wire brushes and washing with clean water. Before applying the prime coat, thoroughly clean the surface of dust and loose materials, and make certain the surface is completely dry

NOTE: Priming coat shall not be applied in wet weather nor when the temperature is below 35°F (2°C) without special authorization from the Engineer.

- (b) **Priming Surface.** Immediately after the surface is prepared and in proper condition, apply a prime coat to all concrete surfaces requiring dampproofing, as directed above. Completely cover the surface to be dampproofed with a uniform continuous film of the priming coat applied at the rate of 1.25 gallon per 100 square feet (0.5 liters per square meters).

- (c) **Dampproofing.** After the surface has been primed, cover the entire surface shall with two coats of hot asphalt as specified above.

NOTE: Asphalt shall not be heated above a temperature of 350°F (177°C) and shall be stirred frequently while being heated. Kettles shall be equipped with armored thermometers.